

Classwork on translations and function notation

Write the following in term of $f(x)$ regardless of the parent function. (e.g. $g(x) = 5f(x+2) - 4$)

1. $g(x) = \sqrt{x} + 1$	2. $g(x) = (x-3)^2 + 1$	3. $g(x) = 2 x+1 - 4$
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Describe all the transformations that are taking place.

4. $g(x) = 2 x+1 - 4$	5. $g(x) = -\frac{1}{2}\sqrt{x} + 1$
6. $g(x) = 3(x+4)^2$	7. $g(x) = -f\left(\frac{1}{2}x\right)$
8. $g(x) = f(-2x)$	9. $g(x) = f\left(\frac{1}{2}(x-5)\right) + 3$

Where do the following points end up after their transformation(s)?

Function	Where does each point move to?
10. $g(x) = \sqrt{x-4} + 1$	(9, 3)
11. $g(x) = 2 x+2 - 3$	(-6, 6)
12. $g(x) = \sqrt{-x} + 2$	(4, 2)